

## Figure 1

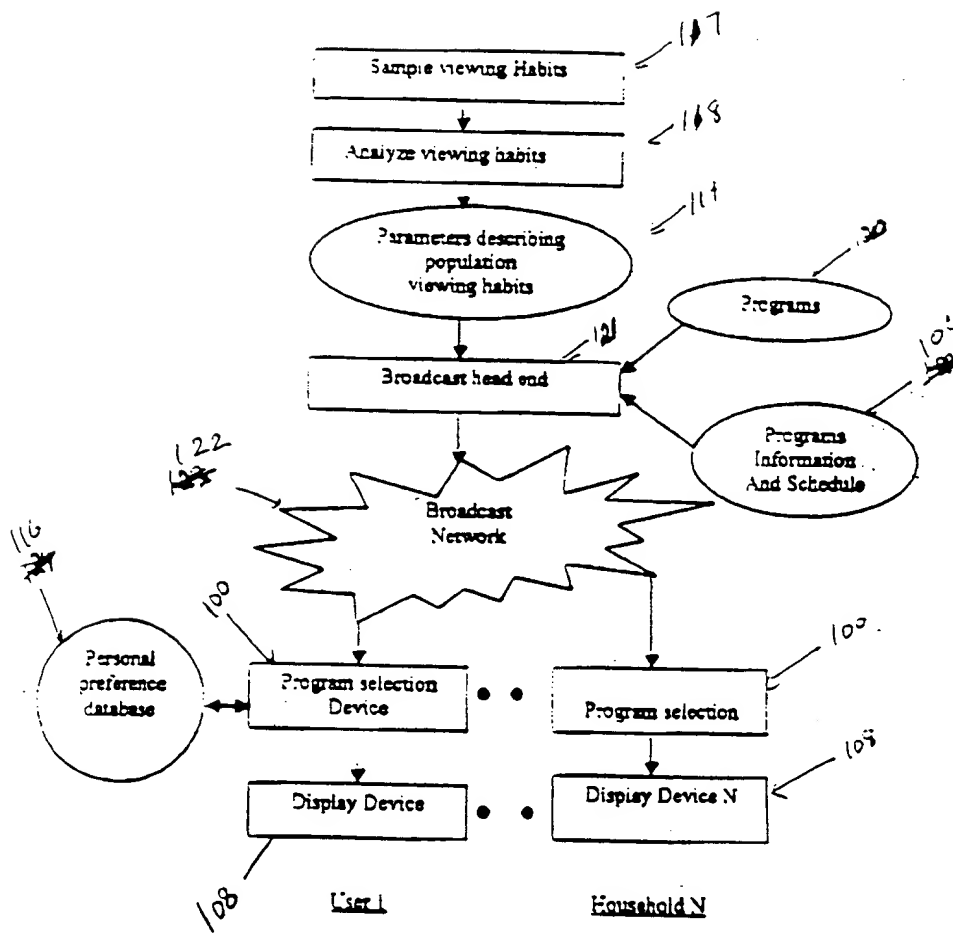


Figure 2

### Examples of Program Information

<p>Title = Seinfeld Program Type = Sitcom Category = Comedy Actors = ( Actor1 , Actor2)</p>	<p>Title = US Debt Report Program Type = News article Category = US Govt. Financial People Mentioned = ( Bill Clinton, Alan Greenspan)</p>
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Example 1

Example 2

Figure 3

Examples for traits

Movie  
Adventure  
Sports  
Mad About You  
dynamic trait 1  
Dynamic trait 2  
NBC NEWS  
FRIDAY Movie  
Premier Mad About You

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Examples for Liking for viewer N

Movie = 1  
Adventure = 1  
Sports = 0.3  
Mad About You = 5  
dynamic trait 1 = 3  
Dynamic trait 2 = 5  
NBC NEWS = 13  
FRIDAY Movie = 18  
Premier Mad About You = 15

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Figure 4

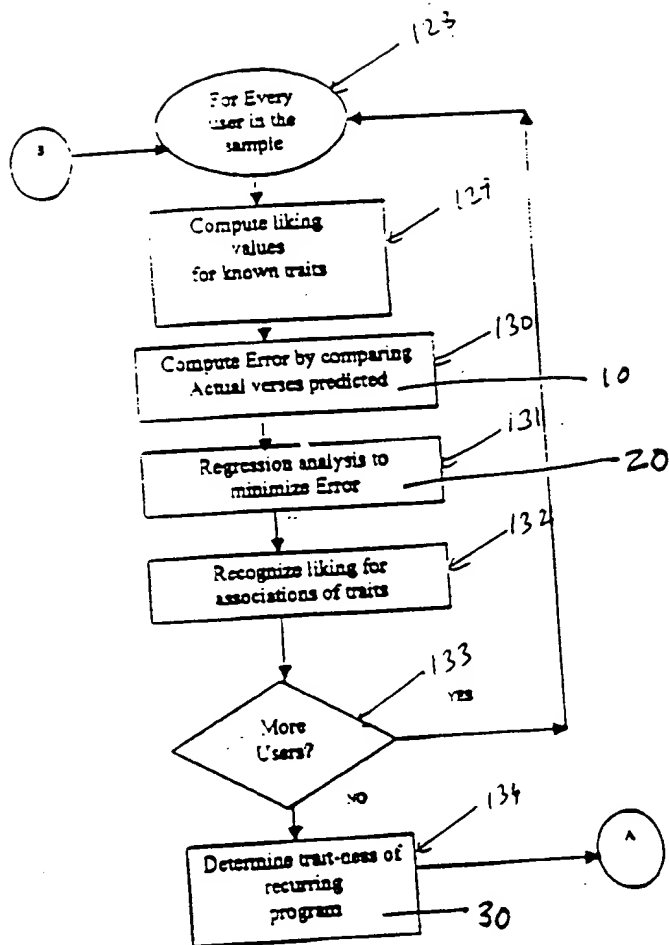


Figure 5(a)

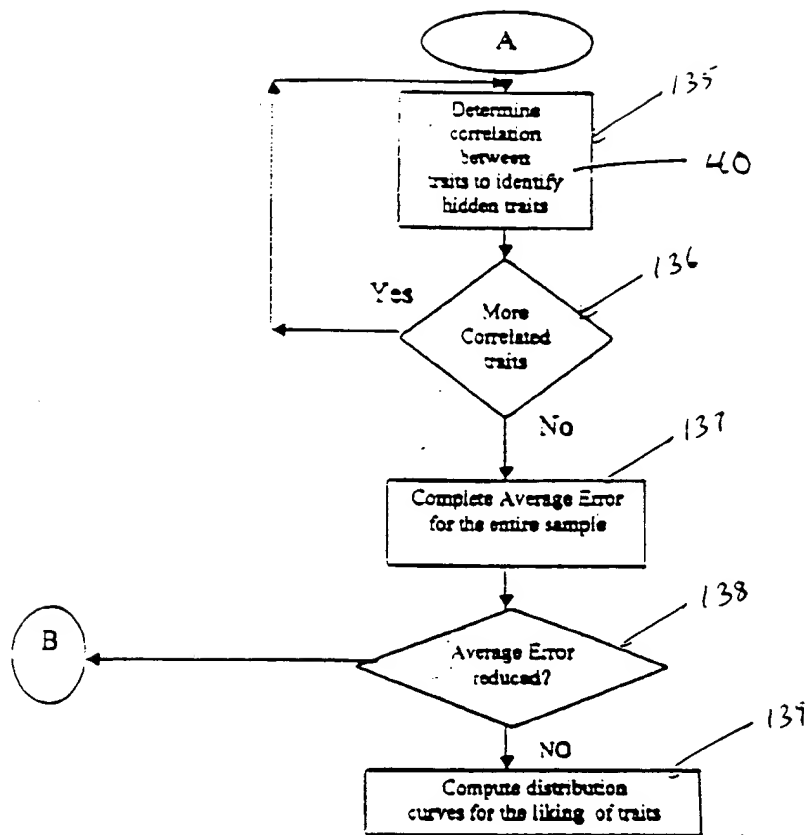


Figure 5 (b)

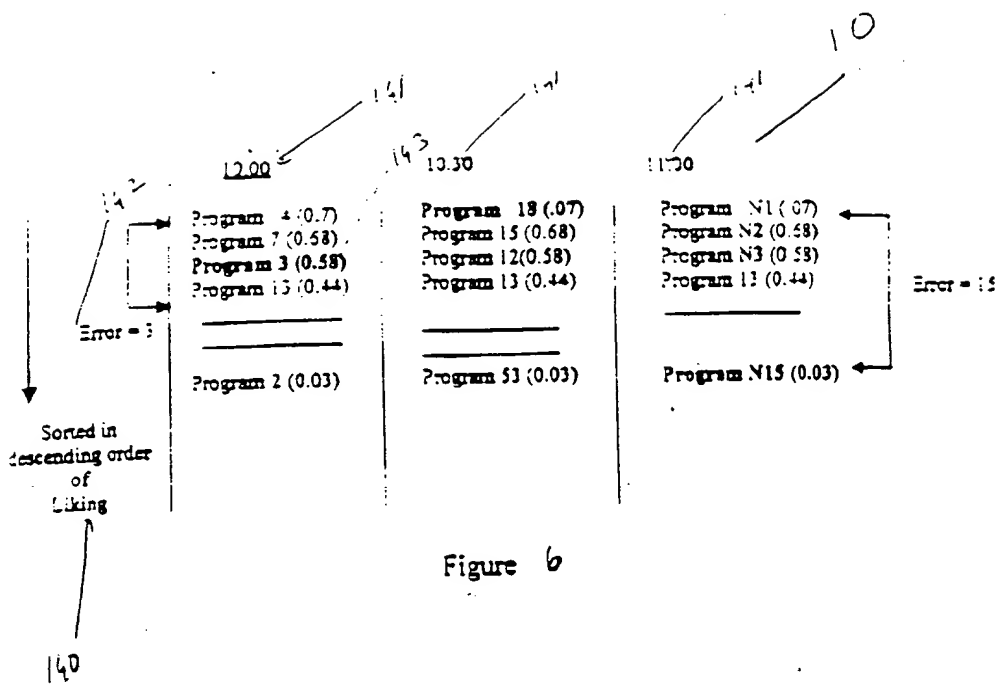


Figure 6

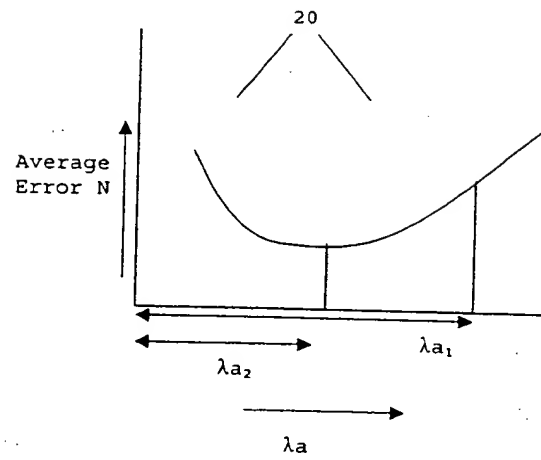
Figure 7

Current Liking Value

$$\begin{aligned}\lambda_{a_1} &= 2 \\ \lambda_{b_1} &= 5 \\ \lambda_{c_1} &= -3 \\ \lambda_{d_1} &= 0\end{aligned}$$

Next Liking Value

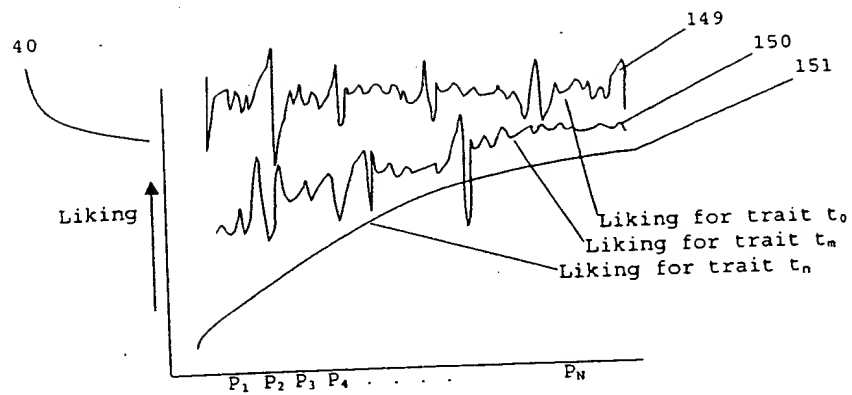
$$\begin{aligned}\lambda_{a_2} &= 1.5 \\ \lambda_{a_1} &= 5 \\ \lambda_{a_1} &= -3 \\ \lambda_{a_1} &= 0\end{aligned}$$



$$\begin{aligned}(\lambda_b &= \lambda_{b_1} \\ \lambda_c &= \lambda_{c_1} \\ \lambda_d &= \lambda_{d_1} \\ &\vdots \\ &\vdots )\end{aligned}$$



Figure 8



$t_m$  and  $t_n$  are correlated

$t_m$  can be expressed as  $t_m = t_x + t_m'$   
 $t_n$  can be expressed as  $t_n = a_x t_x + t_n'$

and

Computing Traitness of a trait is a program

30

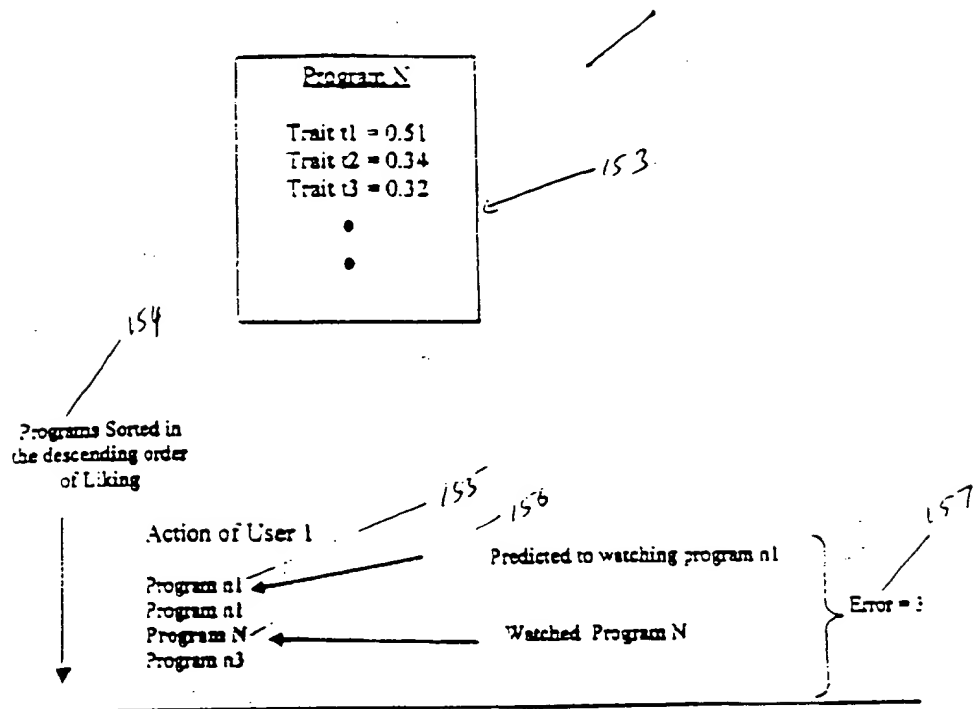


Figure 9(a)

# Computing Traitness of a trait a program 30

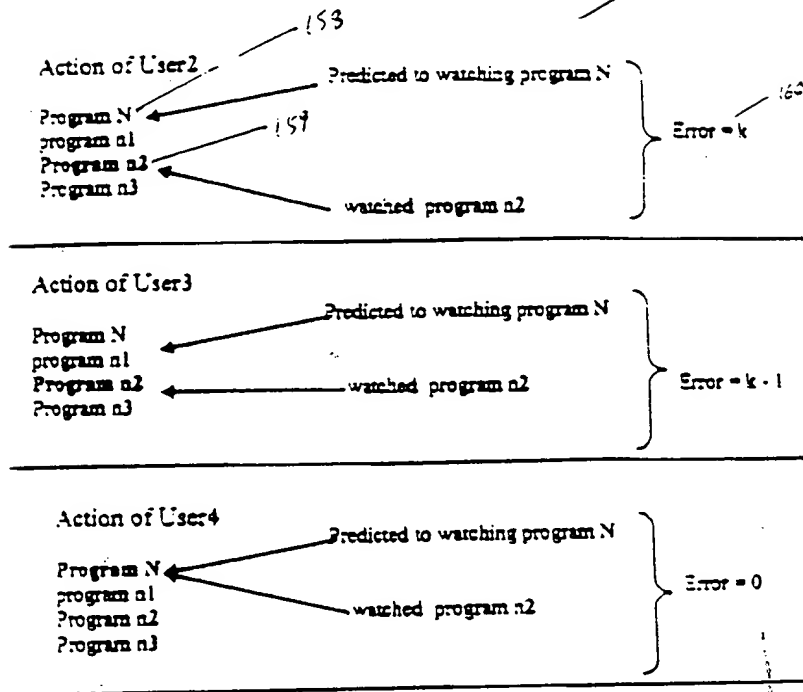
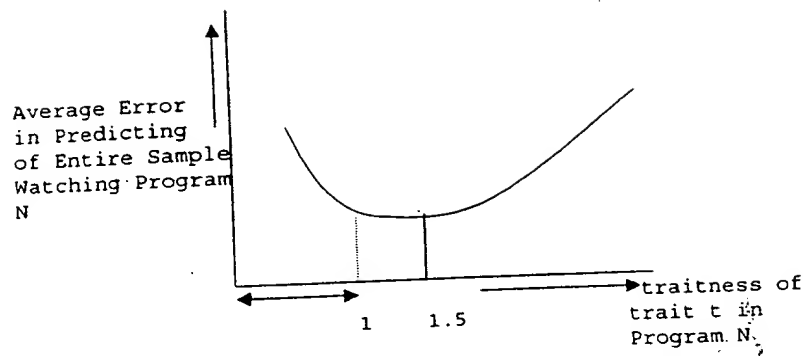


Figure 9(b)

Figure 9(c)



Optimal value of traitness

e.g. comedy-ness in Seinfeld = 1.5  
comedy-ness in Frasier = 0.89

Example for Liking Distribution Record format

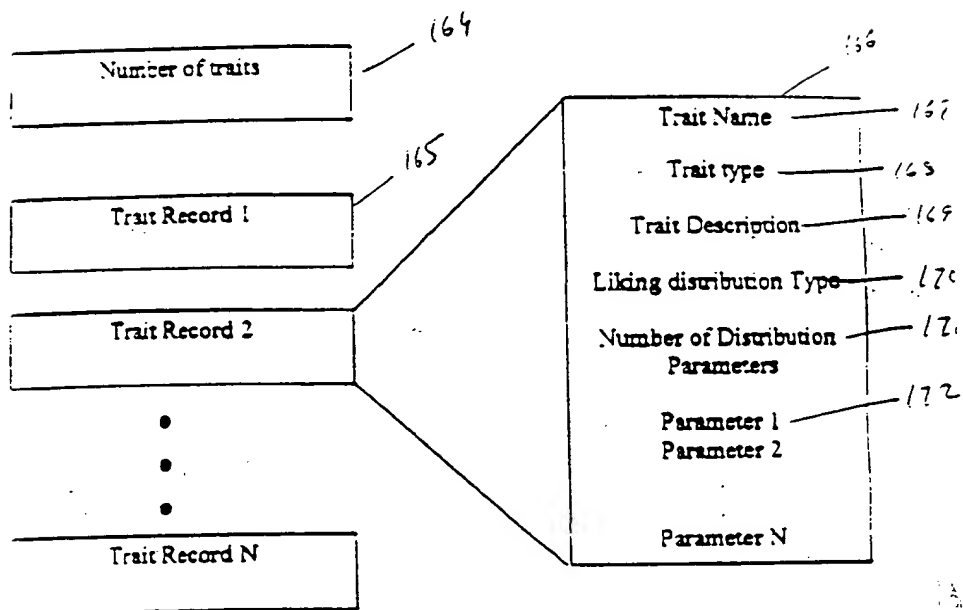


Figure 10

Some Sample Values For Fields in trait Record

Trait type

Static,  
dynamic  
Association  
Generated

Trait Description

(NBC, 'NEWS'),  
SUBSTRING('CIA') IN DESC.  
TITLE

Distribution

Normal  
Exponential  
Defined type 1  
Defined type 2

Distribution Parameters

Mean = 13, Deviation = 2

Figure 11

Example for Traitness of recurring Programs

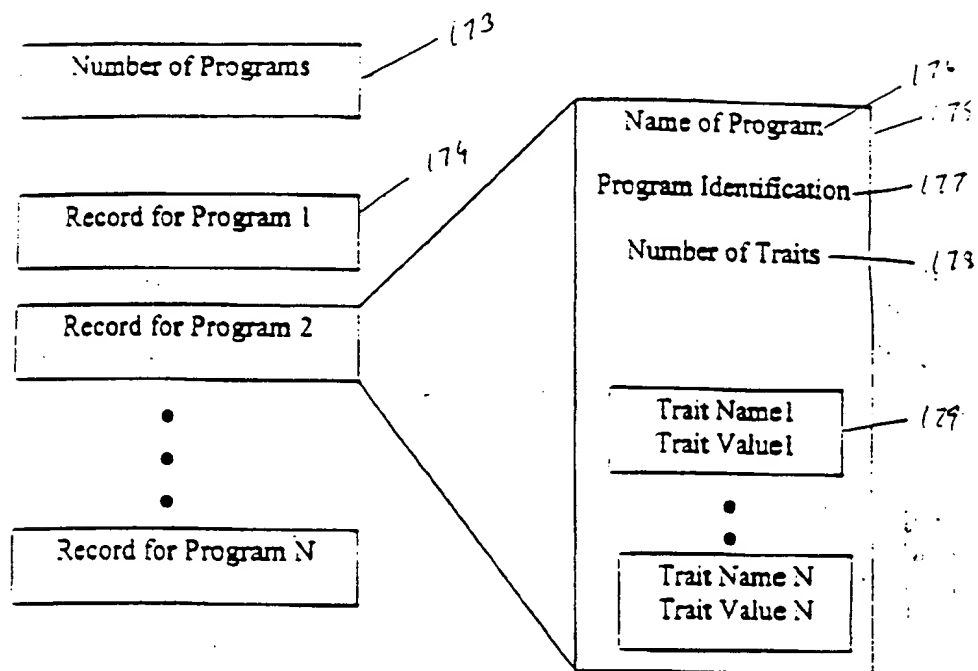


Figure 12

Example For Broadcasting traitness as a part of EPG Data

Program Info

Seinfeld,

NBC ,

Comedy = 0.07

sitcom ,

Dynamic trait 1 = 0.1

•

•

Actor = Seinfeld

Figure 13



### Example for Selection Record

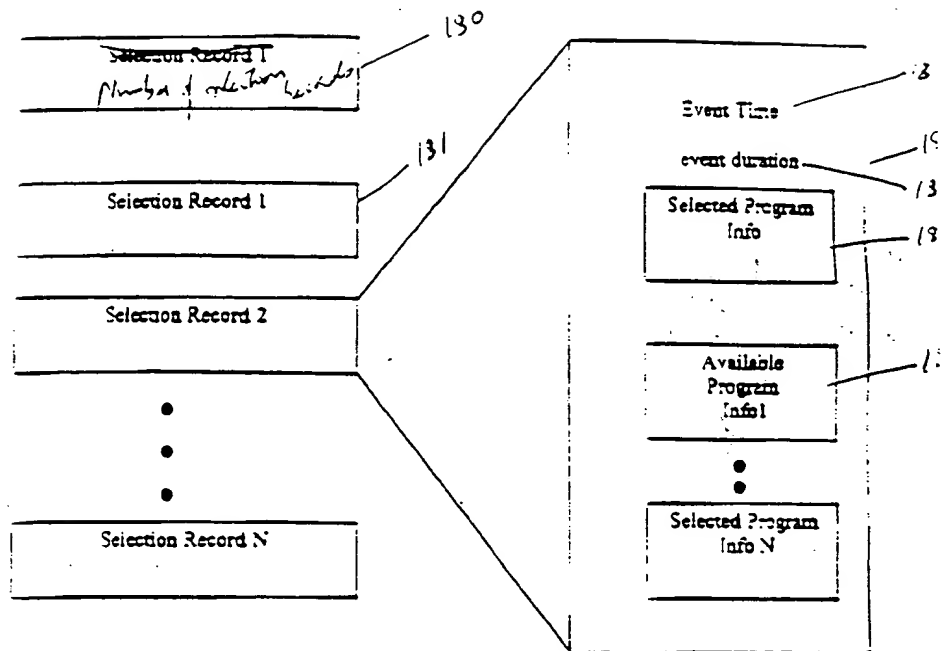


Figure 14

### Generation of User Selection History

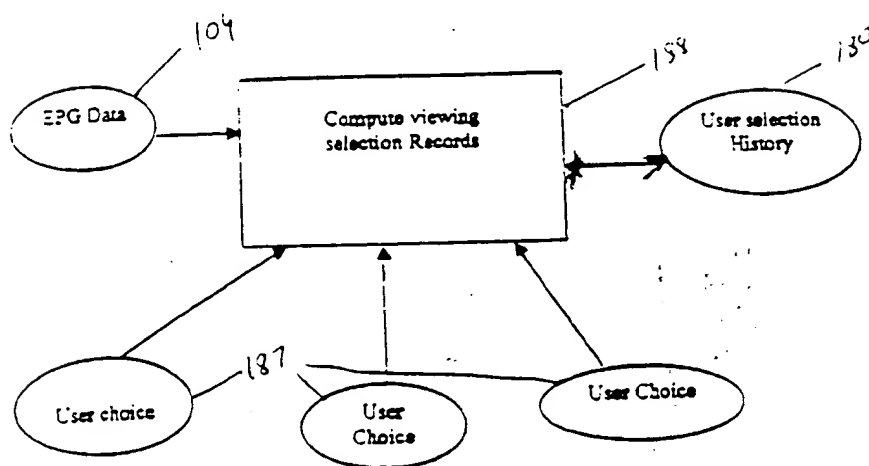


Figure 15

Learning Liking for traits for a given user

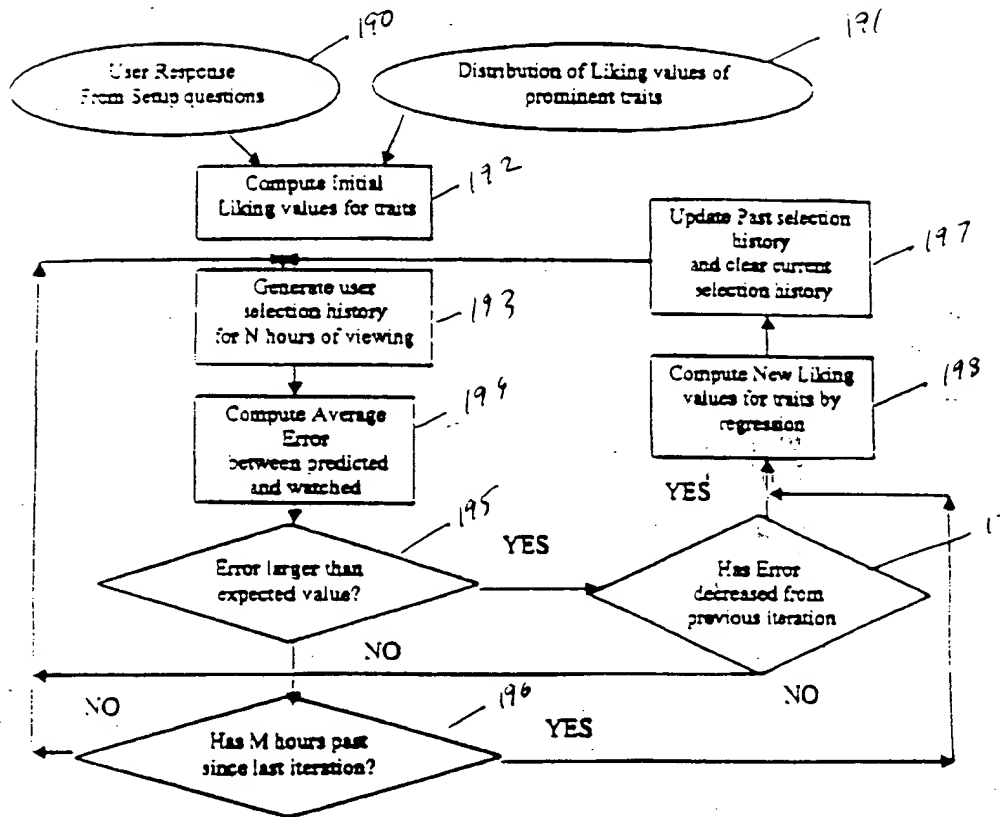


Figure 16

### Computing Relevance

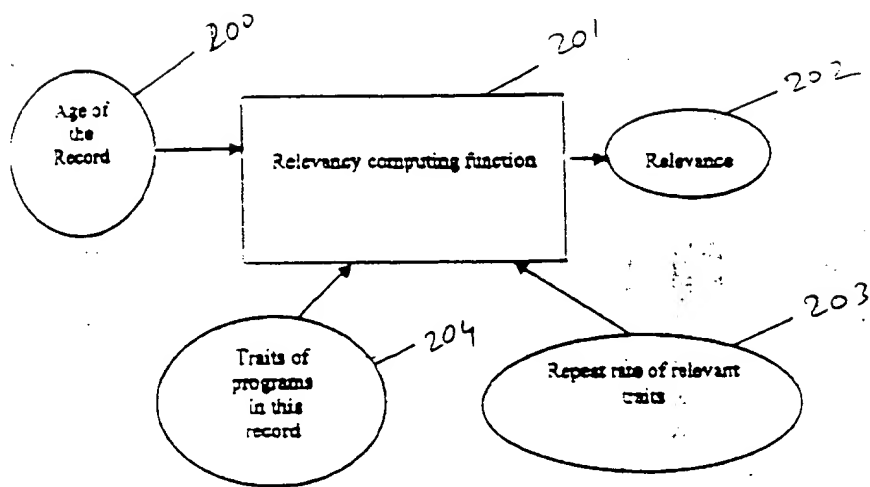


Figure 17 (a)

Figure 17(b)

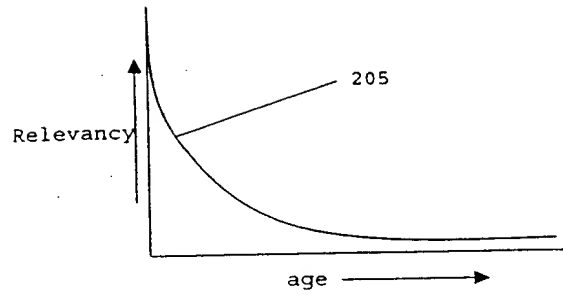
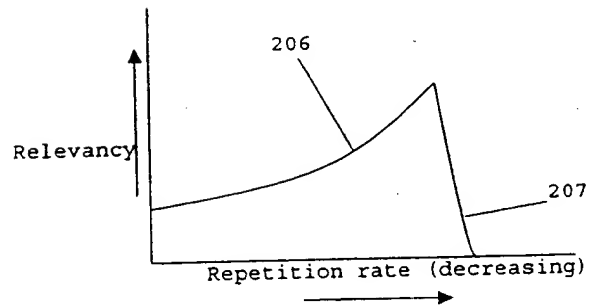


Figure 17(c)



Updation of past History

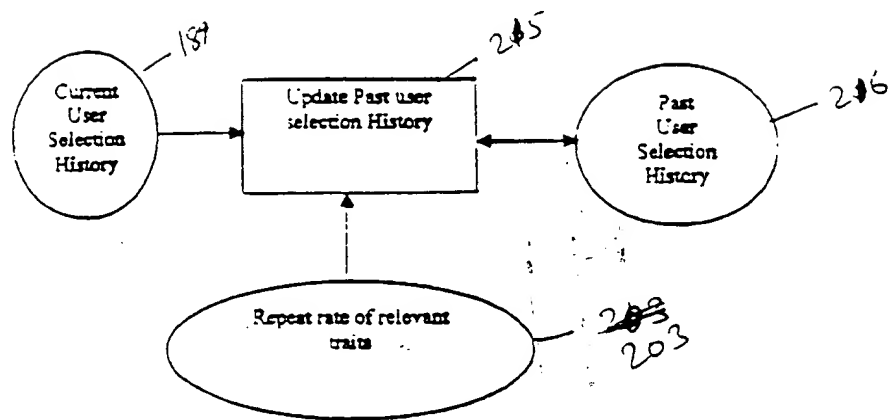


Figure 18(a)

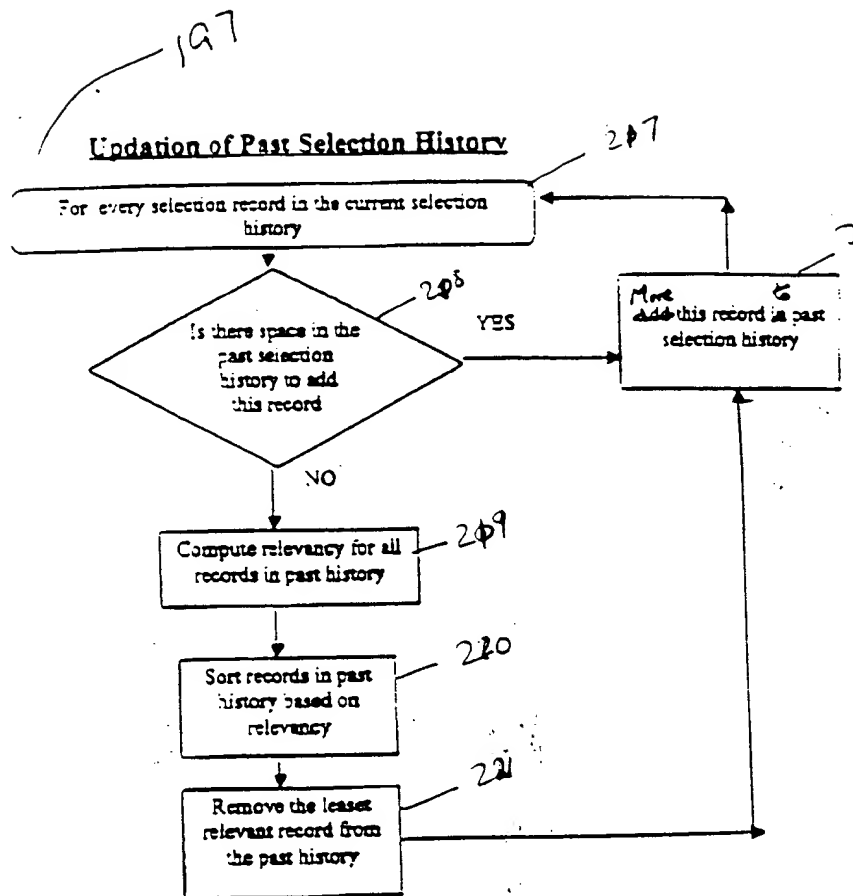


Figure 18(b)

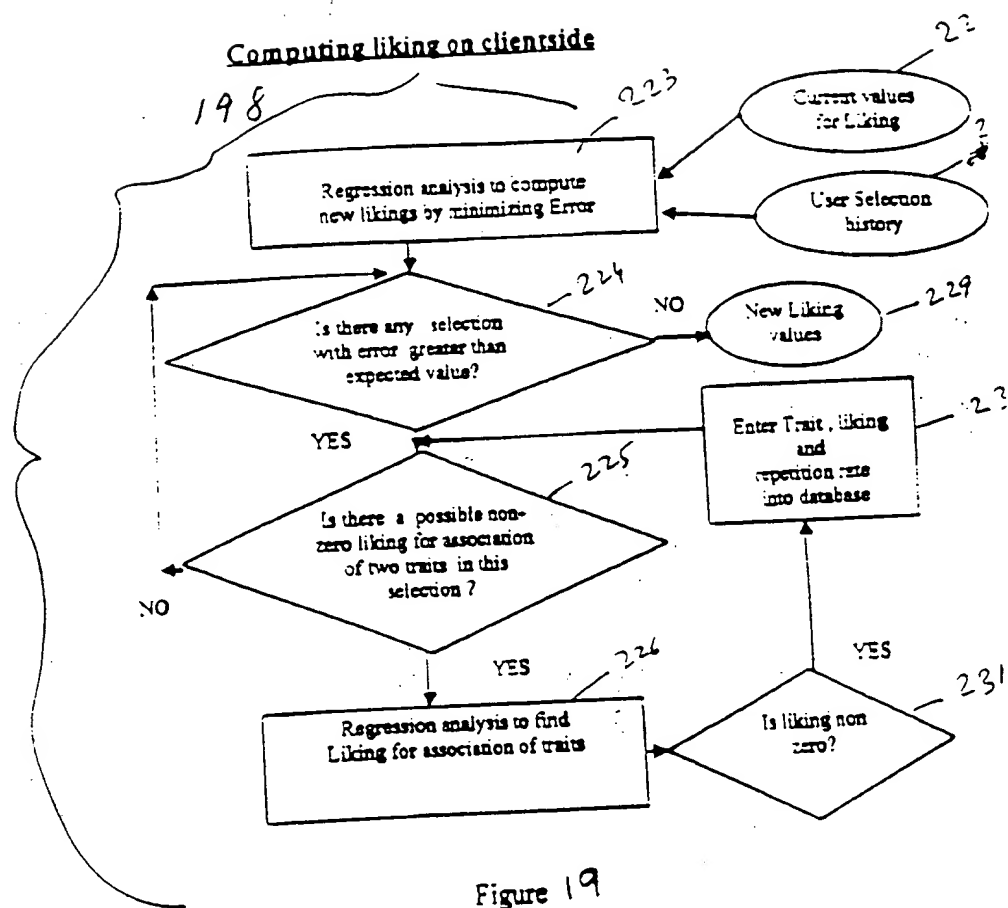


Figure 19



Computing scores for programs for future prediction

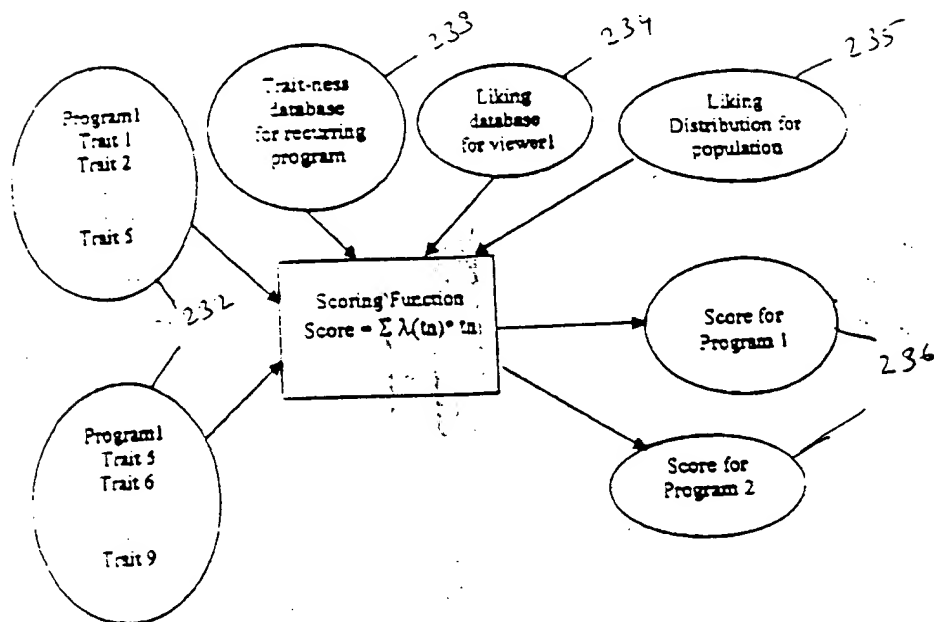
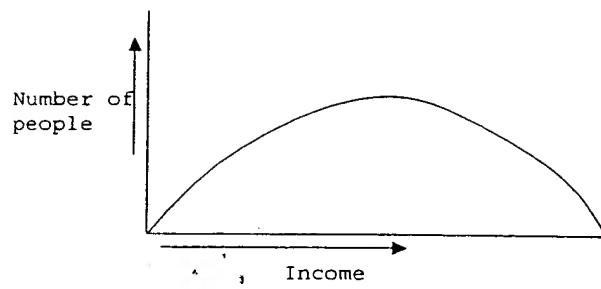
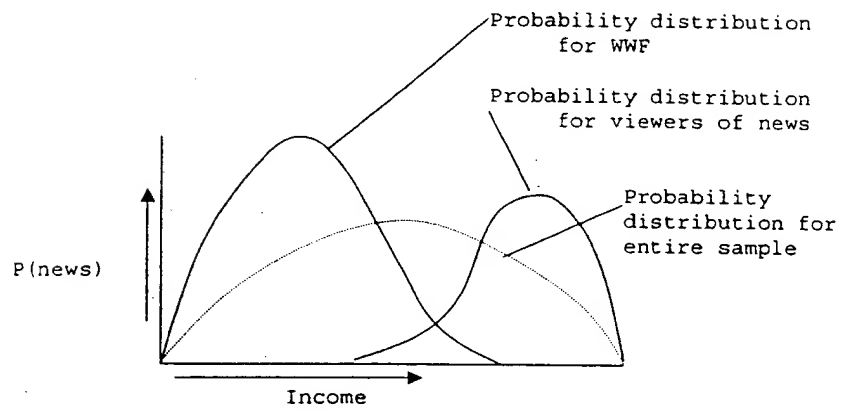


Figure 20

Figure 21(a)



(i)



(ii)

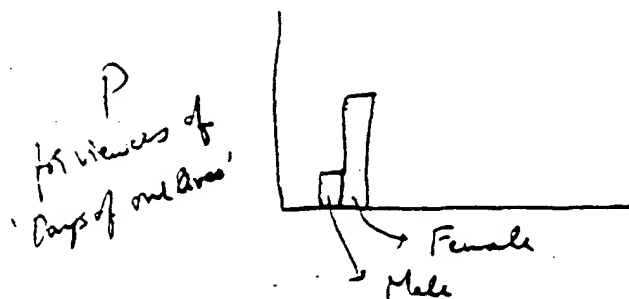
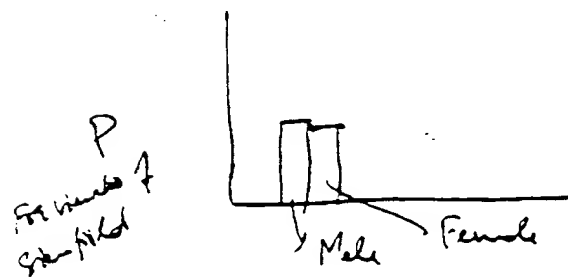
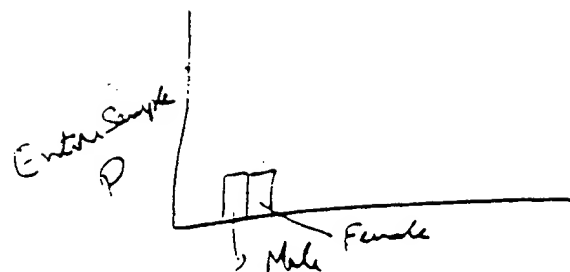


FIGURE 21b

## System Architecture

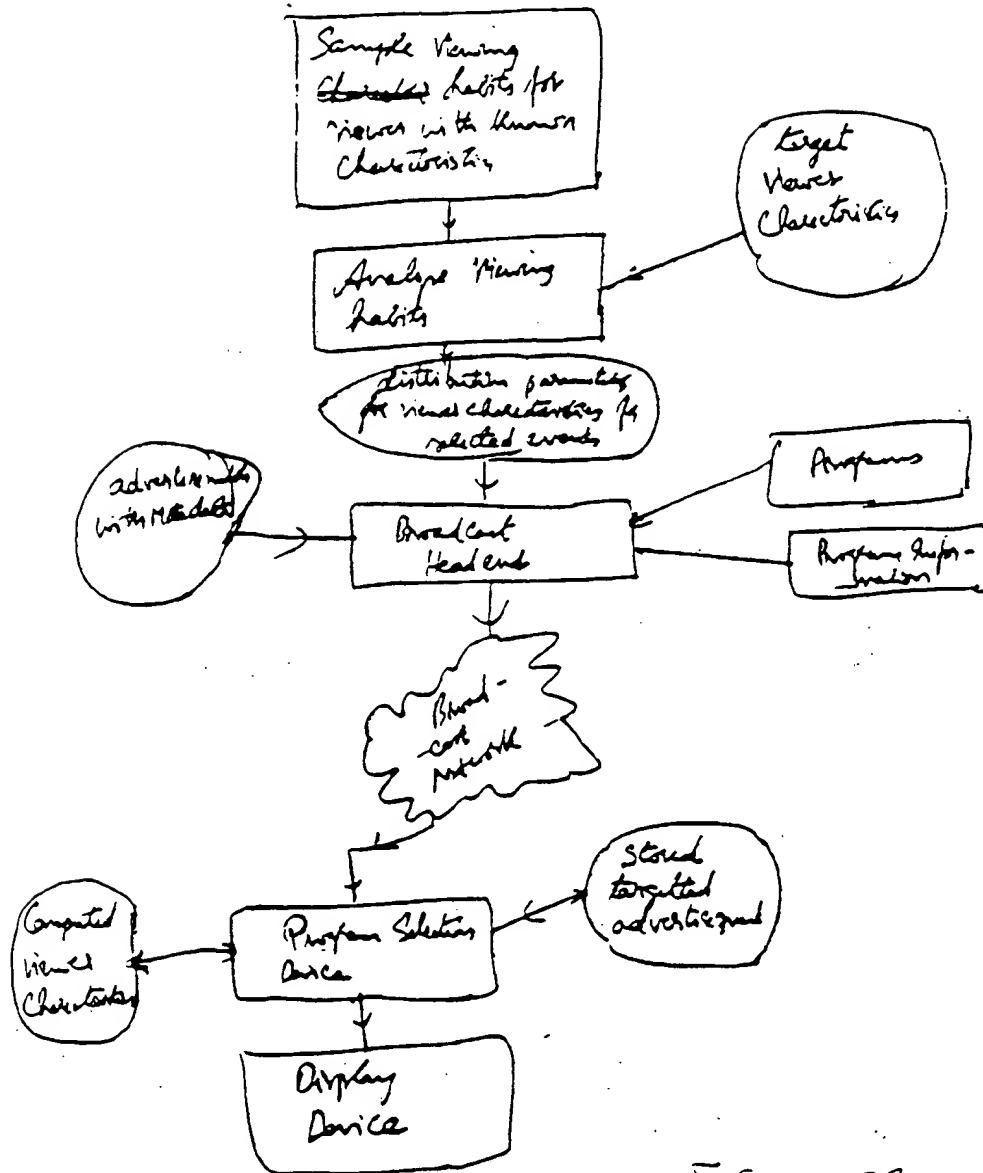


Figure 22

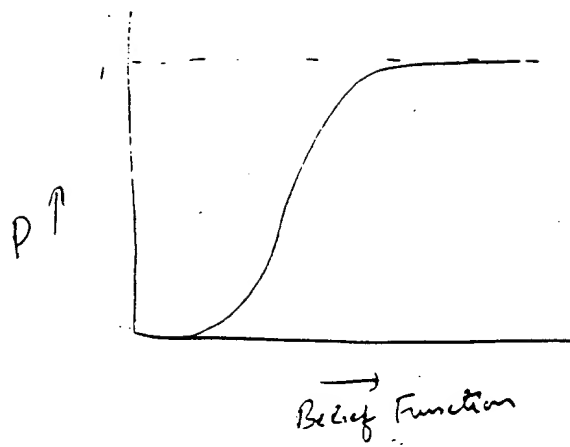


Figure 23a

Demographic Trait Record format

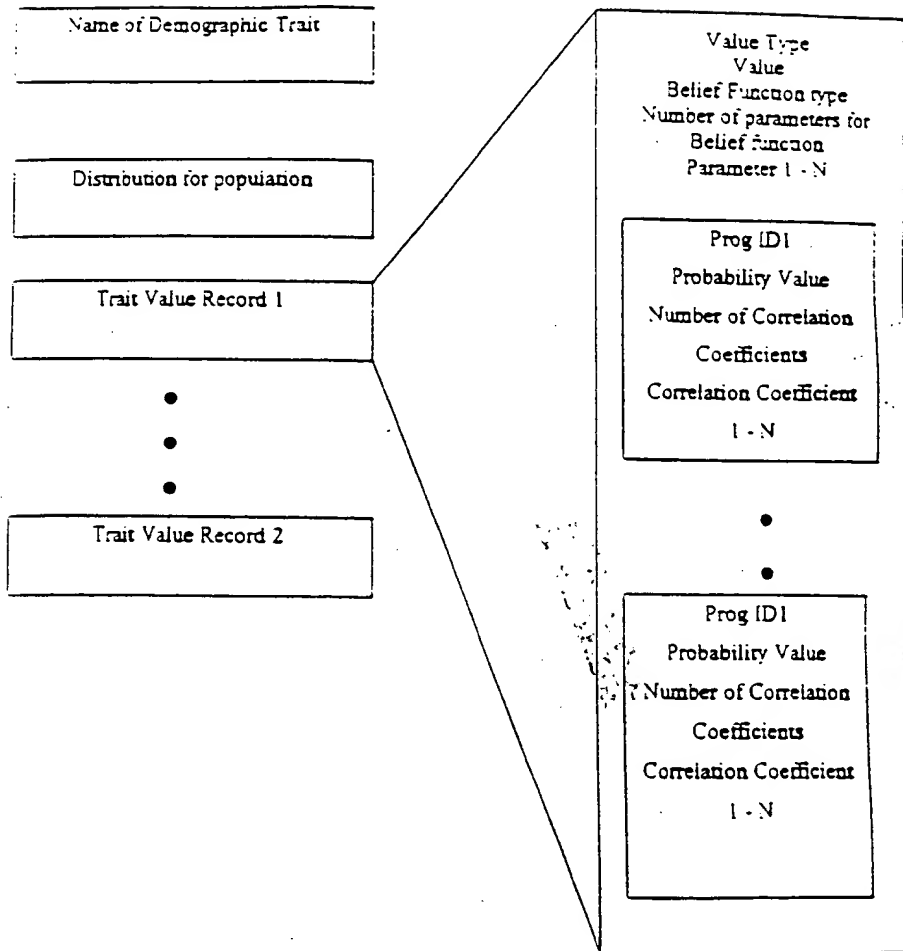


Figure 23b

Advertisement Targeting Record format

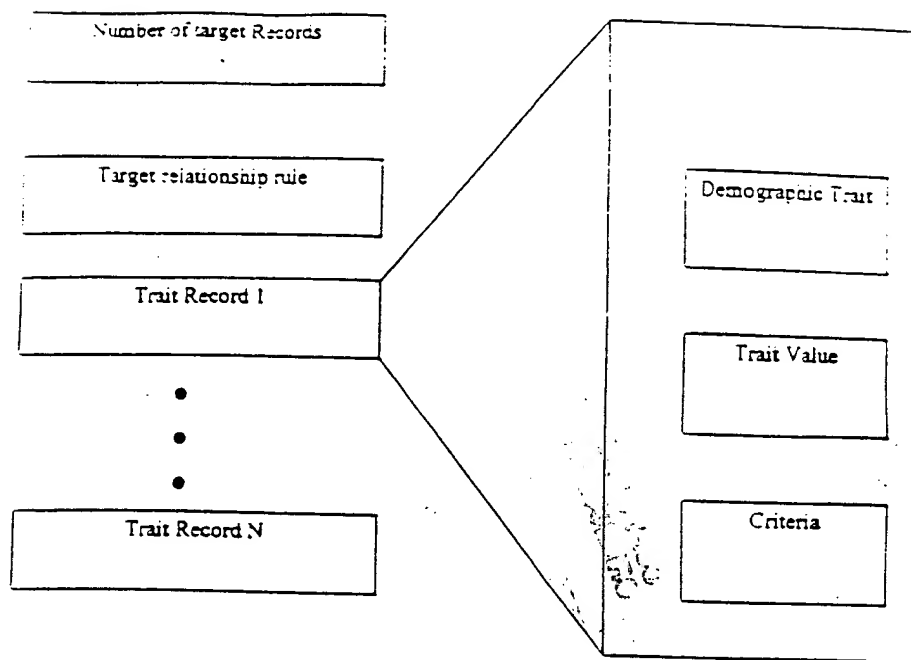


Figure 236

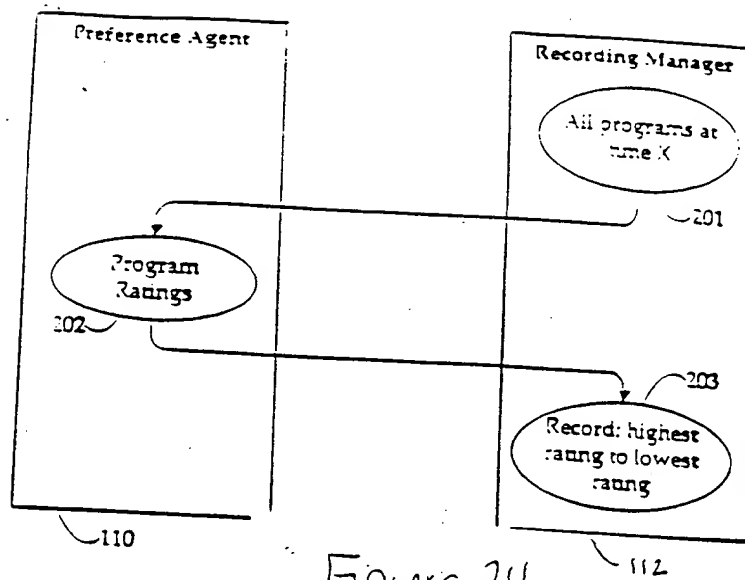


Figure 24

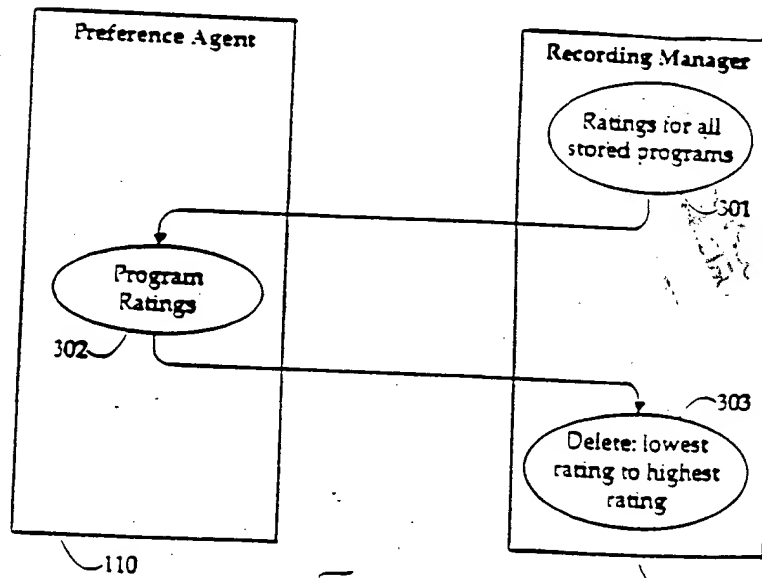


Figure 25



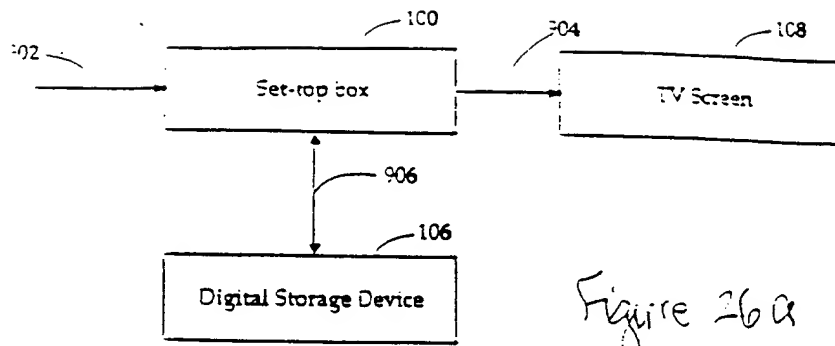


Figure 26a

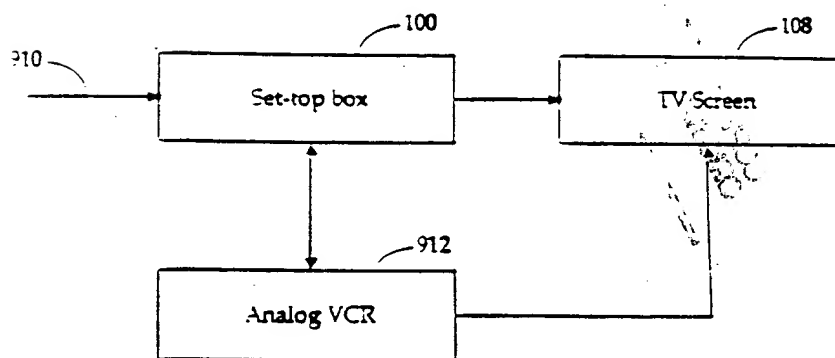


Figure 26b

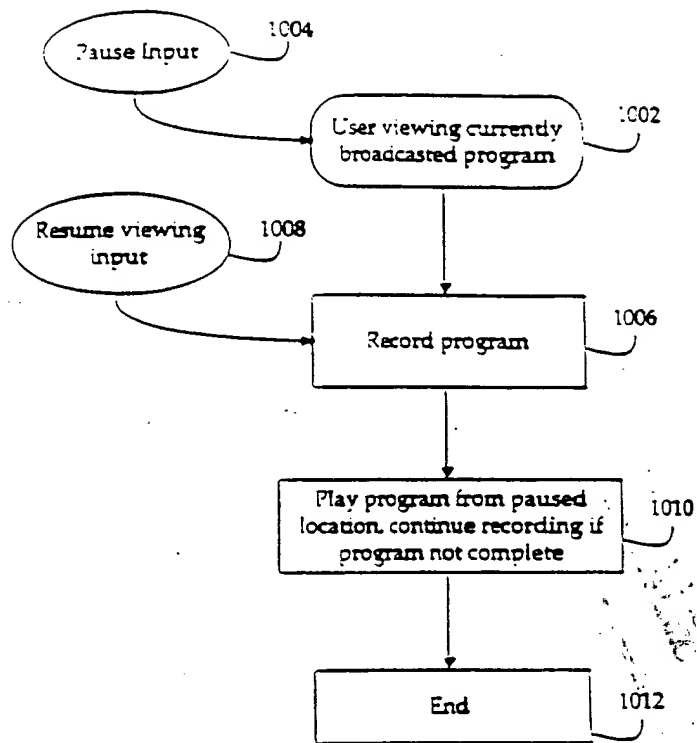


Figure 27

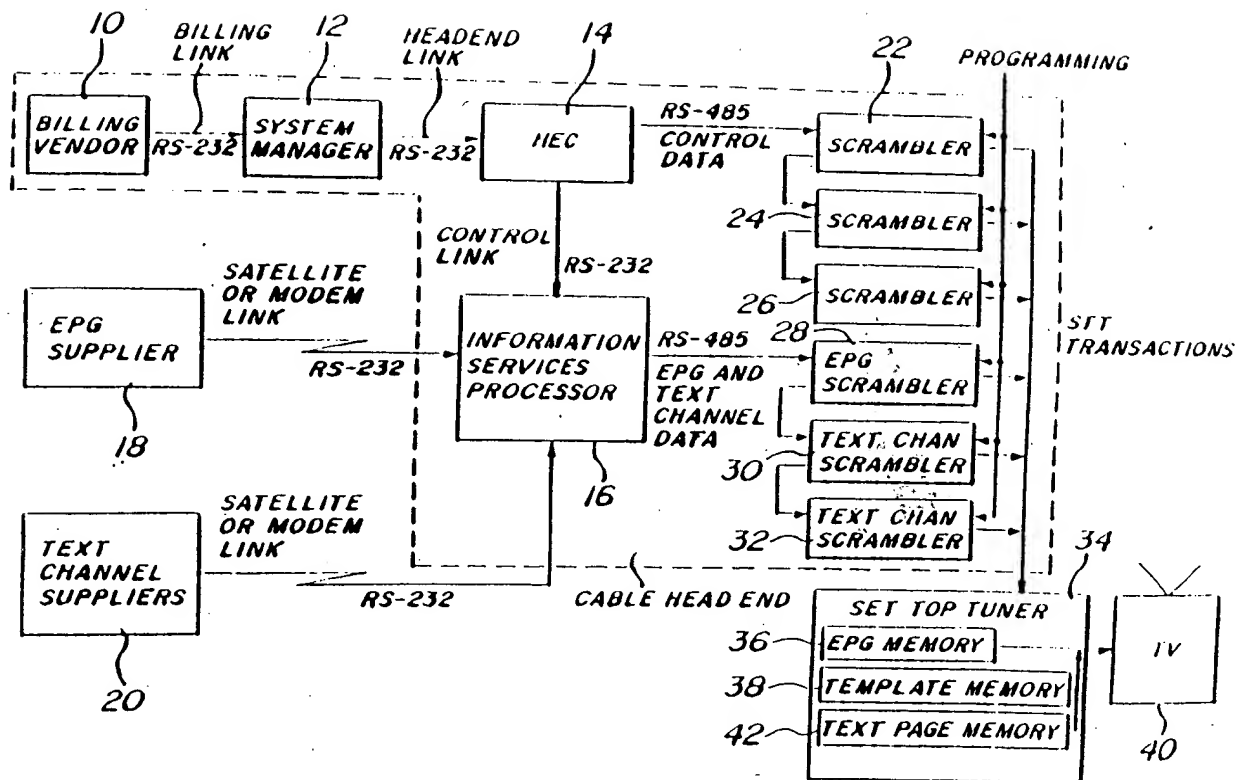


Figure 28

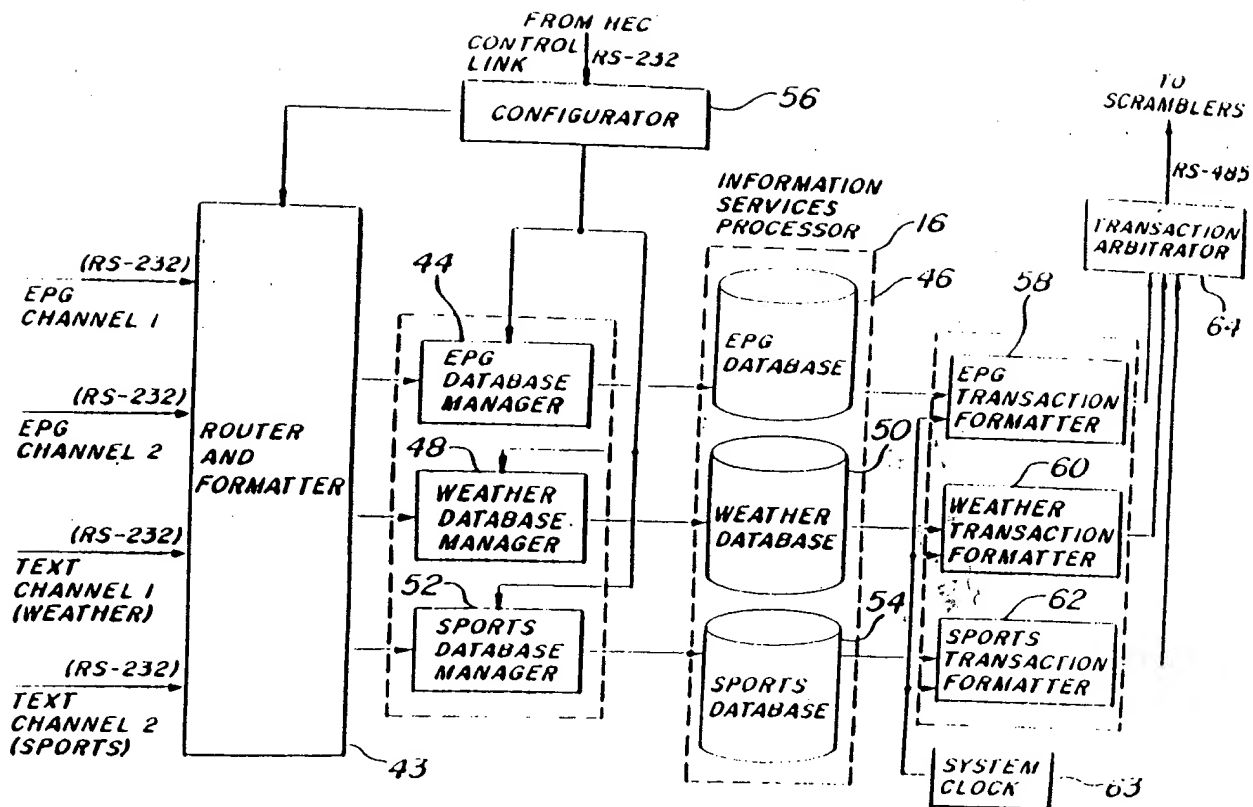


Figure 29

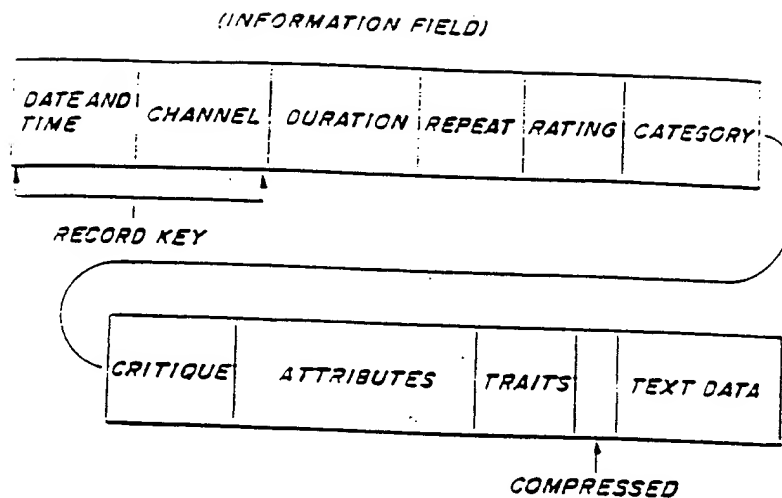


Figure 30

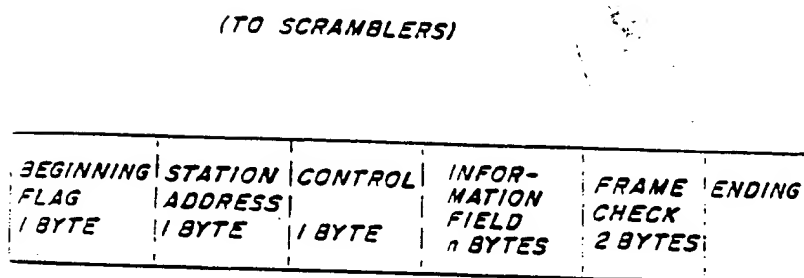


Figure 31

EPG TRANSACTION FORMATTER 58

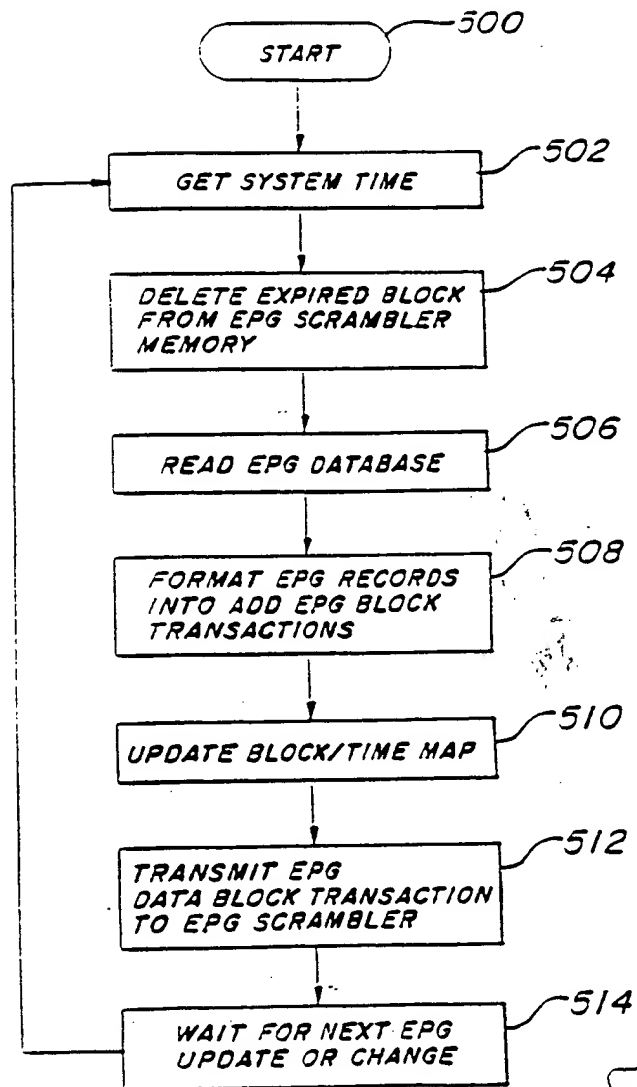


Figure 32

TEXT CHANNEL TRANSACTION FORMATTER 60,62

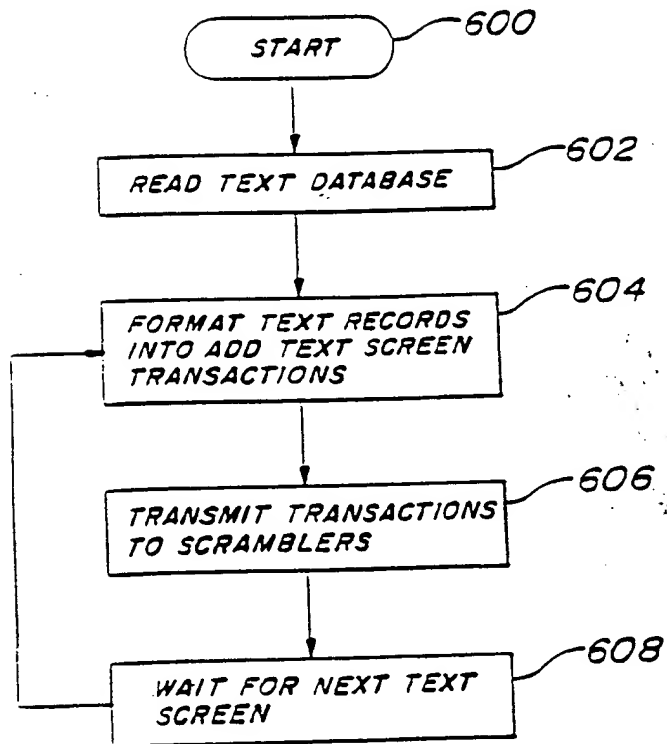


Figure 33

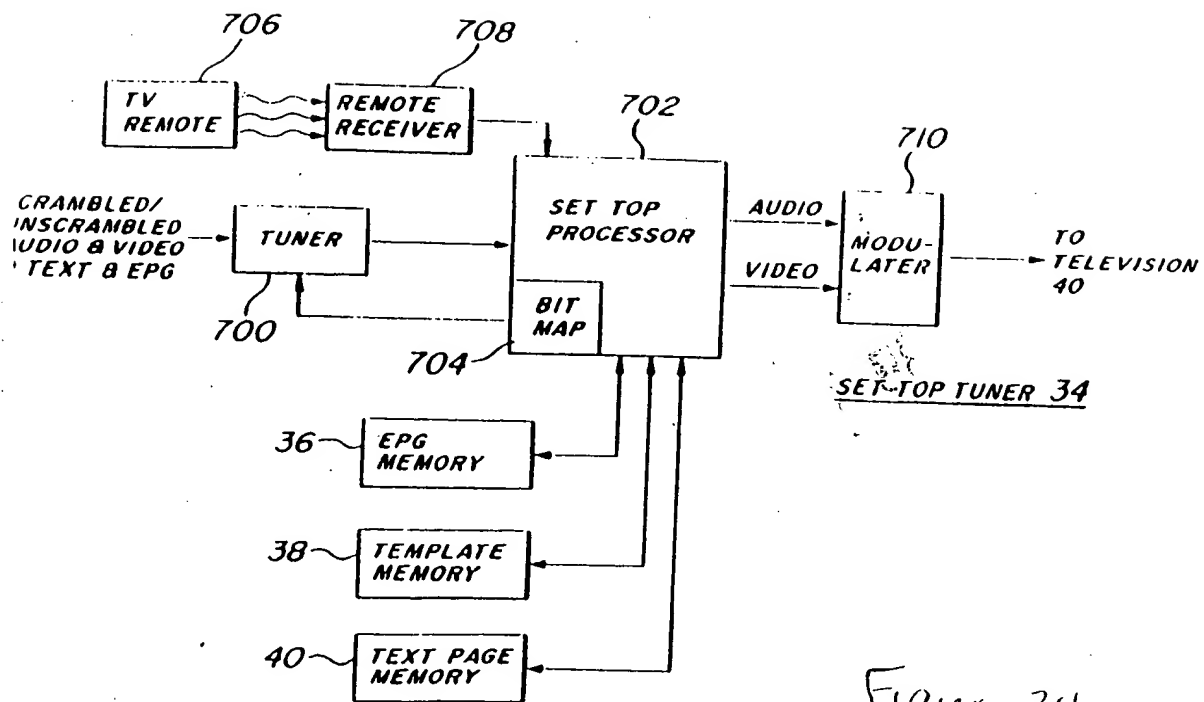


Figure 34



Process for automatically creating multiple profiles and automatically identifying currently active profiles

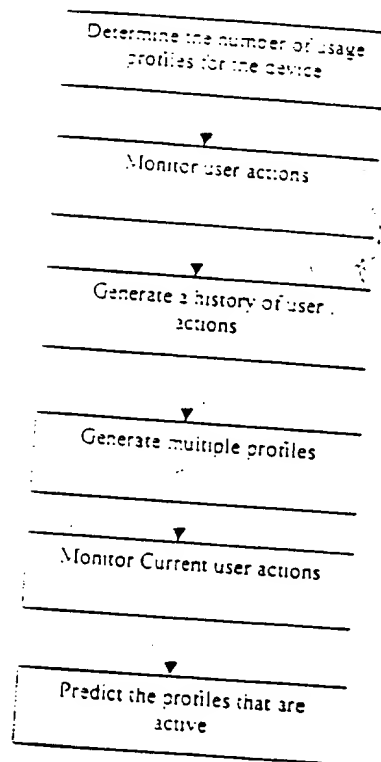


Figure 35

# CIRCULAR PROGRAM GUIDE

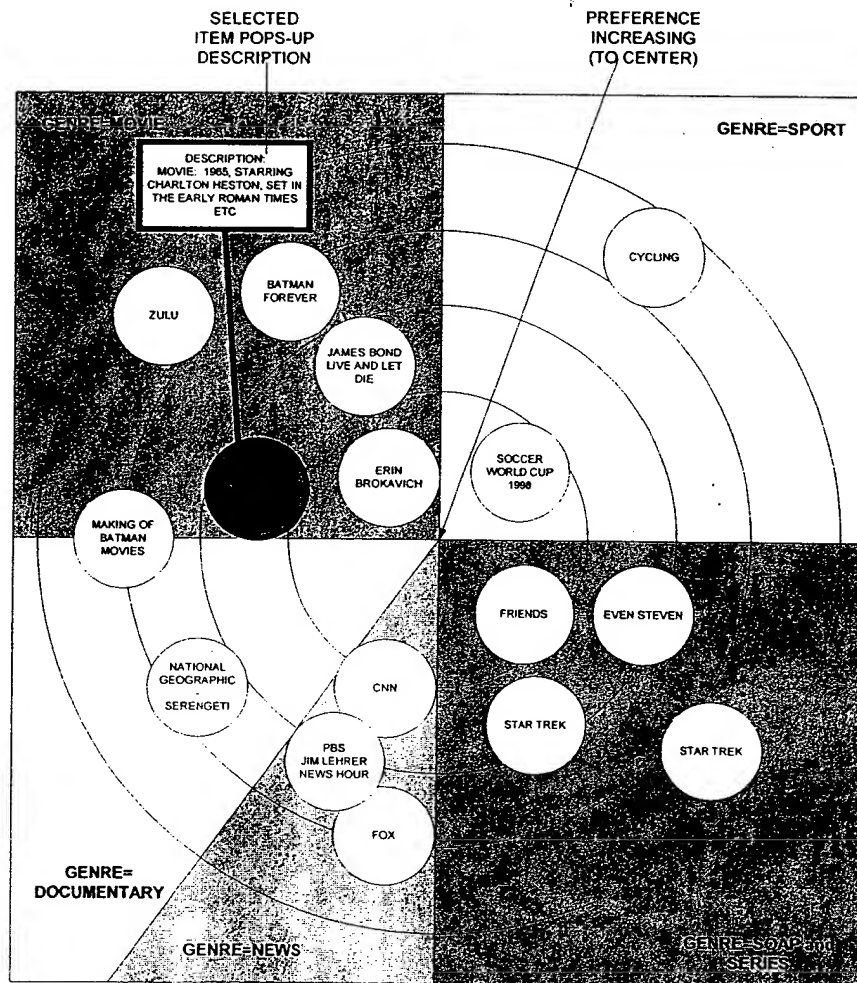


Figure 36